

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.-18. (Canceled)

19. (Currently Amended) A semiconductor device comprising:

a transistor; and transistor including:

a semiconductor film comprising silicon formed on a first insulating film;

a second insulating film including a gate insulating film formed over the semiconductor film wherein the second insulating film contacts an upper surface of the first insulating film; and

a gate electrode formed over the semiconductor film with the second insulating film interposed therebetween, and

an interlayer insulating film comprising silicon oxide and halogen and formed over said transistor,

wherein said ~~interlayer~~ second insulating film includes halogen at a concentration of $5 \times 10^{20} \text{ cm}^{-3}$ or less and carbon at a concentration of $5 \times 10^{19} \text{ cm}^{-3}$ or less.

20. (Previously Presented) A semiconductor device according to claim 19, wherein the concentrations of halogen and carbon are detected by secondary ion mass spectroscopy.

21. (Previously Presented) A semiconductor device according to claim 19, wherein the halogen is chlorine.

22. (Previously Presented) A semiconductor device according to claim 19, wherein the halogen is fluorine.

23. (Currently Amended) A semiconductor device according to claim 19, wherein said interlayer insulating film includes carbon at a concentration of $1 \times 10^{18} \text{ cm}^{-3}$ or less.

24. (Canceled)

25. (Previously Presented) A semiconductor device according to claim 19, wherein the interlayer insulating film is formed by plasma chemical vapor deposition using an organic silane.

26. (Previously Presented) A semiconductor device according to claim 25, wherein the organic silane comprises at least a material selected from the group consisting of $\text{Si}(\text{OC}_2\text{H}_5)_4$, $\text{Si}_2\text{O}(\text{OC}_2\text{H}_5)_6$, $\text{Si}_3\text{O}_2(\text{OC}_2\text{H}_5)_8$, $\text{Si}_4\text{O}_3(\text{OC}_2\text{H}_5)_{10}$ and $\text{Si}_5\text{O}_4(\text{OC}_2\text{H}_5)_{12}$.

27.-62. (Canceled)

63. (New) A semiconductor device comprising:
a transistor including:

a semiconductor film comprising crystallized silicon formed on a first insulating film;

a second insulating film including a gate insulating film formed over the semiconductor film wherein the second insulating film directly contacts an upper surface of the insulating film; and

a gate electrode formed over the semiconductor film with the second insulating film interposed therebetween, and

an interlayer insulating film formed over said transistor, the interlayer insulating film comprising silicon oxide and halogen,

wherein said second insulating film includes halogen at a concentration of $5 \times 10^{20} \text{ cm}^{-3}$ or less and carbon at a concentration of $5 \times 10^{19} \text{ cm}^{-3}$ or less.

64. (New) A semiconductor device according to claim 63, wherein the concentrations of halogen and carbon are detected by secondary ion mass spectroscopy.

65. (New) A semiconductor device according to claim 63, wherein the halogen is chlorine.

66. (New) A semiconductor device according to claim 63, wherein the halogen is fluorine.

67. (New) A semiconductor device according to claim 63, wherein said interlayer insulating film includes carbon.

68. (New) A semiconductor device according to claim 63, wherein the interlayer insulating film is formed by plasma chemical vapor deposition using an organic silane.

69. (New) A semiconductor device comprising:
a transistor including:

a semiconductor film comprising silicon formed on a first region of a first insulating film;

a second insulating film including a gate insulating film formed over the semiconductor film wherein the second insulating film extends beyond a side edge of the semiconductor film to cover a second region of the insulating film, the second region being adjacent to the first region;

a gate electrode formed over the semiconductor film with the second insulating film interposed therebetween,

an interlayer insulating film formed over said transistor, the interlayer insulating film comprising silicon oxide and halogen,

wherein a portion of said second insulating film over the second region of the first insulating film includes halogen at a concentration of $5 \times 10^{20} \text{ cm}^{-3}$ or less and carbon at a concentration of $5 \times 10^{19} \text{ cm}^{-3}$ or less.

70. (New) A semiconductor device according to claim 70, wherein the concentrations of halogen and carbon are detected by secondary ion mass spectroscopy.

71. (New) A semiconductor device according to claim 70, wherein the halogen is chlorine.

72. (New) A semiconductor device according to claim 70, wherein the halogen is fluorine.

73. (New) A semiconductor device according to claim 70, wherein said interlayer insulating film includes carbon.

74. (New) A semiconductor device according to claim 70, wherein the interlayer insulating film is formed by plasma chemical vapor deposition using an organic silane.

75. (New) A semiconductor device comprising:

a transistor including:

a semiconductor film comprising crystallized silicon formed on a first region of a first insulating film;

a second insulating film including a gate insulating film formed over the semiconductor film wherein the second insulating film extends beyond a side edge of the semiconductor film to cover a second region of the insulating film, the second region being adjacent to the first region;

a gate electrode formed over the semiconductor film with the second insulating film interposed therebetween,

an interlayer insulating film formed over said transistor, the interlayer insulating film comprising silicon oxide and halogen,

wherein a portion of said second insulating film over the second region of the first insulating film includes halogen at a concentration of $5 \times 10^{20} \text{ cm}^{-3}$ or less and carbon at a concentration of $5 \times 10^{19} \text{ cm}^{-3}$ or less.

76. (New) A semiconductor device according to claim 75, wherein the concentrations of halogen and carbon are detected by secondary ion mass spectroscopy.

77. (New) A semiconductor device according to claim 75, wherein the halogen is chlorine.

78. (New) A semiconductor device according to claim 75, wherein the halogen is fluorine.

79. (New) A semiconductor device according to claim 75, wherein said interlayer insulating film includes carbon.

80. (New) A semiconductor device according to claim 75, wherein the interlayer insulating film is formed by plasma chemical vapor deposition using an organic silane.